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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/859,512	05/18/2001	Kiminori Tamai	208808US2	4273

22850 7590 11/19/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
PIZIALI, ANDREW T	

ART UNIT	PAPER NUMBER
1775	20

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/859,512	TAMAI ET AL.	
	Examiner	Art Unit	
	Andrew T Piziali	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 September 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-10 and 12-16* is/are pending in the application.

4a) Of the above claim(s) *6,7 and 14-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,8-10,12 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *15* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claims refer to surface resistivity values, but the specification fails to mention surface resistivity values.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 5, 8-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,662,962 to Kawata et al. (hereinafter referred to as Kawata) in view of USPN 6,398,900 to Hieda et al. (hereinafter referred to as Hieda) in view of USPN 6,316,110 to Anzaki et al. (hereinafter referred to as Anzaki) in view of USPN 6,379,788 to Choi et al. (hereinafter referred to as Choi).

Regarding claims 1-3, 5, 8-10 and 12, Kawata discloses a transparent conductive multi-layer structure which comprises a substrate overlaid with a conductive layer containing fine conductive particles (see entire document including column 2, lines 58-63, column 3, lines 51-55, and column 5, lines 11-23). Kawata discloses that the surface resistivity may range from 630 to 1700 Ω/□ and the visible light transmittance may range from 94.8 to 96 (columns 13 and 14, Tables 1 and 3).

Kawata does not disclose placing the structure on a substrate, but Hieda discloses that it is known to attach an electromagnetic wave shield structure to the front surface of a plasma display panel to shield electromagnetic waves and near-infrared rays generated from a plasma display panel (see entire document including column 1, lines 18-31, column 4, lines 45-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to attach the electromagnetic wave shield of Kawata to a plasma display panel, as disclosed by Hieda, because the electromagnetic waves and near-infrared rays generated from the plasma display panel would be shielded.

Kawata does not disclose the use of an anchor layer and a hard coating layer, but Anzaki discloses that it is known to coat an electromagnetic wave shield with an adhesive layer and a hard coating layer to protect the shield from air and to prevent the glass from shattering when broken (see entire document including column 6, lines 36-45 and column 7, lines 39-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an anchoring adhesive layer and a hard coating layer to the structure of Kawata, as disclosed by Anzaki, because the layers would protect the shield from air and prevent the glass from shattering when broken.

Anzaki does not specifically mention using a UV curable hard coating layer, but does disclose that the hard coating layer may operate as an antireflective layer (column 7, lines 39-47). Choi discloses that it is known to coat an electromagnetic wave shield with an antireflective hard coating layer comprising a UV-curable polymeric layer (see entire document including column 1, lines 13-23, column 3, lines 7-17, and column 5, lines 50-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a UV-

curable polymeric antireflective layer for the hard coat layer of Anzaki, as taught by Choi, because such a layer provides the desired antireflective characteristics and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Regarding claims 2 and 9, Kawata discloses that the particles are ITO (column 5, lines 11-23).

Regarding claims 3 and 10, Kawata discloses that the substrate may be glass (column 2, lines 58-63).

Regarding claims 5 and 12, Kawata discloses that the structure has a haze ranging from 0 to 1% (column 5, lines 5-10 and columns13 and 14, Tables 1 and 3).

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata in view of Hieda in view Anzaki in view of Choi as applied to claims 1-3, 5, 8-10 and 12 above, and further in view of USPN 5,886,819 to Murata et al. (hereinafter referred to as Murata).

Kawata does not mention roughening the surface of the article to increase the haze value, but Murata discloses that it is known to roughen the surface of an article to increase the haze value (column 1, lines 6-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to roughen the surface of the article of Kawata to acquire any desired haze value, because some applications desire a higher haze value.

5. Claims 1-3, 5, 8-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,662,962 to Kawata in view of USPN 6,398,900 to Hieda in view of USPN 6,316,110 to Anzaki in view of USPN 6,448,492 to Okada et al. (hereinafter referred to as Okada).

Regarding claims 1-3, 5, 8-10 and 12, Kawata discloses a transparent conductive multi-layer structure which comprises a substrate overlaid with a conductive layer containing fine conductive particles (see entire document including column 2, lines 58-63, column 3, lines 51-55, and column 5, lines 11-23). Kawata discloses that the surface resistivity may range from 630 to 1700 Ω/□ and the visible light transmittance may range from 94.8 to 96 (columns 13 and 14, Tables 1 and 3).

Kawata does not disclose placing the structure on a substrate, but Hieda discloses that it is known to attach an electromagnetic wave shield structure to the front surface of a plasma display panel to shield electromagnetic waves and near-infrared rays generated from a plasma display panel (see entire document including column 1, lines 18-31, column 4, lines 45-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to attach the electromagnetic wave shield of Kawata to a plasma display panel, as disclosed by Hieda, because the electromagnetic waves and near-infrared rays generated from the plasma display panel would be shielded.

Kawata does not disclose the use of an anchor layer and a hard coating layer, but Anzaki discloses that it is known to coat an electromagnetic wave shield with an adhesive layer and a hard coating layer to protect the shield from air and to prevent the glass from shattering when broken (see entire document including column 6, lines 36-45 and column 7, lines 39-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an anchoring adhesive layer and a hard coating layer to the structure of Kawata, as disclosed by Anzaki, because the layers would protect the shield from air and prevent the glass from shattering when broken.

Anzaki does not specifically mention using a silicone-based or UV-curable hard coating layer, but Okada discloses that it is known to coat an electromagnetic wave shield with a silicone-based or UV-curable hard coating layer (see column 1, lines 18-27 and column 18, lines 30-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a silicone-based or UV-curable hard coating layer for the hard coat layer of Anzaki, as taught by Okada, because such a layer provides the desired hard coat characteristics and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Regarding claims 2 and 9, Kawata discloses that the particles are ITO (column 5, lines 11-23).

Regarding claims 3 and 10, Kawata discloses that the substrate may be glass (column 2, lines 58-63).

Regarding claims 5 and 12, Kawata discloses that the structure has a haze ranging from 0 to 1% (column 5, lines 5-10 and columns13 and 14, Tables 1 and 3).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata in view of Hieda in view Anzaki in view of Okada as applied to claims 1-3, 5, 8-10 and 12 above, and further in view of USPN 5,886,819 to Murata.

Kawata does not mention roughening the surface of the article to increase the haze value, but Murata discloses that it is known to roughen the surface of an article to increase the haze value (column 1, lines 6-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to roughen the surface of the article of Kawata to acquire any desired haze value, because some applications desire a higher haze value.

7. Claims 1-3, 5, 8-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication No. 08-199096 to Masahito et al. (hereinafter referred to as Masahito) in view of USPN 6,398,900 to Hieda in view of USPN 6,316,110 to Anzaki in view of USPN 6,379,788 to Choi.

Regarding claims 1-3, 5, 8-10 and 12, Masahito discloses a transparent conductive multi-layer structure that comprises a substrate overlaid with a conductive layer containing fine conductive particles (Patent Abstract). Masahito discloses that the structure may have a surface resistivity of 10 to 10^2 Ω/□ (see entire document). Masahito does not disclose the visible light transmittance, but considering the substantially identical transparent conductive multi-layer structure of Masahito compared to the applicants' structure, it appears that the structure of Masahito would possess a visible light transmittance of at least 70%.

Masahito does not specifically disclose placing the structure on a substrate, but Hieda discloses that it is known to attach an electromagnetic wave shield to the front surface of a plasma display panel to shield electromagnetic waves and near-infrared rays generated from a plasma display panel (column 1, lines 18-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to attach the electromagnetic wave shield of Masahito to a plasma display panel, as disclosed by Hieda, because the electromagnetic waves and near-infrared rays generated from the plasma display panel would be shielded.

Masahito does not specifically disclose the use of an anchor layer and a hard coating layer, but Anzaki discloses that it is known to coat an electromagnetic wave shield with an adhesive layer and a hard coating layer to protect the shield from air and to prevent the glass from shattering when broken (column 6, lines 36-45 and column 7, lines 39-46). It would have

been obvious to one having ordinary skill in the art at the time the invention was made to include an anchoring adhesive layer and a hard coat layer to the structure of Masahito, as disclosed by Anzaki, because the layers would protect the shield from air and prevent the glass from shattering when broken.

Anzaki does not specifically mention using a UV curable hard coating layer, but does disclose that the hard coating layer may operate as an antireflective layer (column 7, lines 39-47). Choi discloses that it is known to coat an electromagnetic wave shield with an antireflective hard coating layer comprising a UV-curable polymeric layer (see entire document including column 1, lines 13-23, column 3, lines 7-17, and column 5, lines 50-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a UV-curable polymeric antireflective layer for the hard coat layer of Anzaki, as taught by Choi, because such a layer provides the desired antireflective characteristics and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Regarding claims 2 and 9, Masahito discloses that the particles are ITO (Patent Abstract).

Regarding claims 3 and 10, Masahito discloses that the substrate may be glass (see entire document).

Regarding claims 5 and 12, Masahito discloses that the structure has a haze of less than 1% (see entire document).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masahito in view of Hieda in view Anzaki in view of Choi as applied to claims 1-3, 5, 8-10 and 12 above, and further in view of USPN 5,886,819 to Murata.

Masahito does not mention roughening the surface of the article to increase the haze value, but Murata discloses that it is known to roughen the surface of an article to increase the haze value (column 1, lines 6-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to roughen the surface of the article of Masahito to acquire any desired haze value, because some applications desire a higher haze value.

9. Claims 1-3, 5, 8-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication No. 08-199096 to Masahito in view of USPN 6,398,900 to Hieda in view of USPN 6,316,110 to Anzaki in view of USPN 6,448,492 to Okada.

Regarding claims 1-3, 5, 8-10 and 12, Masahito discloses a transparent conductive multi-layer structure that comprises a substrate overlaid with a conductive layer containing fine conductive particles (Patent Abstract). Masahito discloses that the structure may have a surface resistivity of 10 to 10^2 Ω/ (see entire document). Masahito does not disclose the visible light transmittance, but considering the substantially identical transparent conductive multi-layer structure of Masahito compared to the applicants' structure, it appears that the structure of Masahito would possess a visible light transmittance of at least 70%.

Masahito does not specifically disclose placing the structure on a substrate, but Hieda discloses that it is known to attach an electromagnetic wave shield to the front surface of a plasma display panel to shield electromagnetic waves and near-infrared rays generated from a plasma display panel (column 1, lines 18-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to attach the electromagnetic wave shield of Masahito to a plasma display panel, as disclosed by Hieda, because the electromagnetic waves and near-infrared rays generated from the plasma display panel would be shielded.

Masahito does not specifically disclose the use of an anchor layer and a hard coating layer, but Anzaki discloses that it is known to coat an electromagnetic wave shield with an adhesive layer and a hard coating layer to protect the shield from air and to prevent the glass from shattering when broken (column 6, lines 36-45 and column 7, lines 39-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an anchoring adhesive layer and a hard coat layer to the structure of Masahito, as disclosed by Anzaki, because the layers would protect the shield from air and prevent the glass from shattering when broken.

Anzaki does not specifically mention using a silicone-based or UV-curable hard coating layer, but Okada discloses that it is known to coat an electromagnetic wave shield with a silicone-based or UV-curable hard coating layer (see column 1, lines 18-27 and column 18, lines 30-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a silicone-based or UV-curable hard coating layer for the hard coat layer of Anzaki, as taught by Okada, because such a layer provides the desired hard coat characteristics and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Regarding claims 2 and 9, Masahito discloses that the particles are ITO (Patent Abstract).

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10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masahito in view of Hieda in view Anzaki in view of Okada as applied to claims 1-3, 5, 8-10 and 12 above, and further in view of USPN 5,886,819 to Murata.

Masahito does not mention roughening the surface of the article to increase the haze value, but Murata discloses that it is known to roughen the surface of an article to increase the haze value (column 1, lines 6-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to roughen the surface of the article of Masahito to acquire any desired haze value, because some applications desire a higher haze value.

Response to Arguments

11. Applicant's arguments have been considered but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (703) 306-0145. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

ANDREW T. PIZIALI
PATENT EXAMINER

atp

DEBORAH JONES
SUPERVISORY PATENT EXAMINER